



October 20, 2017

#5E26442-BG1

NMOCD District II  
Mike Bratcher  
811 S. First St.  
Artesia, NM 88210

SUBJECT: SOIL REMEDIATION WORK PLAN FOR THE INCIDENT AT THE QUICK DRAW 22 D # 1  
BATTERY RELEASE, EDDY COUNTY, NEW MEXICO

Dear Mr. Bratcher,

On behalf of Mewbourne Oil Company (Mewbourne), Souder, Miller & Associates (SMA) has prepared this WORK PLAN that describes the assessment, initial delineation and proposed remediation for a release associated with the Quick Draw 22 D #1 Battery release. The site is in UNIT D, SECTION 22, TOWNSHIP 20S, RANGE 25E, NMPM, Eddy County, New Mexico, on BLM land. Figure 1 illustrates the vicinity and location of the site.

Table 1, below, summarizes information regarding the release.

Table 1: Release information and Site Ranking	
Name	Quick Draw 22 D #1 Battery
Company	Mewbourne Oil Company
RP Number	2RP-4304
API Number	30-015-37377
Location	32.564940° -104.480340°
Estimated Date of Release	7/22/17
Date Reported to NMOCD	7/22/17
Land Owner	Federal
Reported To	Mike Bratcher
Source of Release	Lightning Strike
Released Material	Oil
Released Volume	15 bbls
Recovered Volume	10 bbls
Net Release	5 bbls
Nearest Waterway	0.4 Miles from South Seven Rivers
Depth to Groundwater	Estimated to be greater than 50'
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	10
SMA Response Dates	Initial: 8/22/17

## **1.0 Background**

The tank battery was struck by lightning causing a release into a lined secondary containment and south of containment. Following the release, the tanks and secondary containment were removed and disposed of, and the caliche under containment was scraped.

## **2.0 Site Ranking and Land Jurisdiction**

The release site is located approximately 5.1 miles west of the Pecos River, with an elevation of approximately 3,450 feet above sea level. SMA searched the New Mexico State Engineer's Office (NMOSE) online water well database for water wells in the vicinity of the release. 13 wells are located within a three-mile radius of the site. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be 55 feet below ground surface (bgs).

Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Below in Table 2 are the remediation standards and the site ranking for this location. Justification for this site ranking is found in Figure 1 and Appendix B.

Table 2.

<b>Soil Remediation Standards</b>	<b>0 to 9</b>	<b>10 to 19</b>	<b>&gt;19</b>
<b>Benzene</b>	<b>10 PPM</b>	<b>10 PPM</b>	<b>10 PPM</b>
<b>BTEX</b>	<b>50 PPM</b>	<b>50 PPM</b>	<b>50 PPM</b>
<b>TPH</b>	<b>5000 PPM</b>	<b>1000 PPM</b>	<b>100 PPM</b>

<b>Depth to Groundwater</b>	<b>NMOCD Numeric Rank</b>
< 50 BGS = 20	
50' to 99' = 10	10
>100' = 0	
<b>Distance to Nearest Surface Water</b>	<b>NMOCD Numeric Rank</b>
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
<b>Well Head Protection</b>	<b>NMOCD Numeric Rank</b>
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
<b>Total Site Ranking</b>	<b>10</b>

## **3.0 Release Characterization**

On August 22nd and 30th, 2017 and after receiving 811 clearance, SMA field personnel assessed the release area. Soil samples were field-screened using an EC meter and collected to characterize and delineate the release. All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analyses including chlorides by Method 300.0, volatile organics (BTEX) by Method

8021B, and MRO, DRO, and GRO by EPA Method 8015D. Sample locations are depicted on Figure 2. All field screening and laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

#### **4.0 Soil Remediation Workplan**

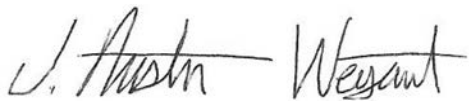
SMA will begin the excavation of affected soils, with approval from area utilities owners via 811 and NMOCD. SMA will continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and a calibrated PID. Excavation will occur to depths of four feet bgs within the pasture around sample points L4 and L5 as shown in Figure 2. A plastic 40 mill liner will be placed in the open excavation at four feet, and a minimum of four sidewall samples will be collected and field screened for chloride impact. Additionally, the area beneath the battery, represented by L2 and L3, will be scraped 0.5 feet bgs to remove the hydrocarbon affected soils there. Approximately 165 cubic yards of contaminated soil are projected to be removed and replaced with clean backfill material to return the surface to previous contours. The contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM, an NMOCD permitted disposal facility.

#### **5.0 Scope and Limitations**

The scope of our services consisted of the performance of assessment sampling, verification of release stabilization, regulatory liaison, and preparation of this work plan. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:  
SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist

Reviewed by:



Jennifer Knowlton, PE  
Senior Engineer II

**ATTACHMENTS:**

**Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Site and Sample Location Map

**Tables:**

Table 3: Summary of Sample Results

**Appendices:**

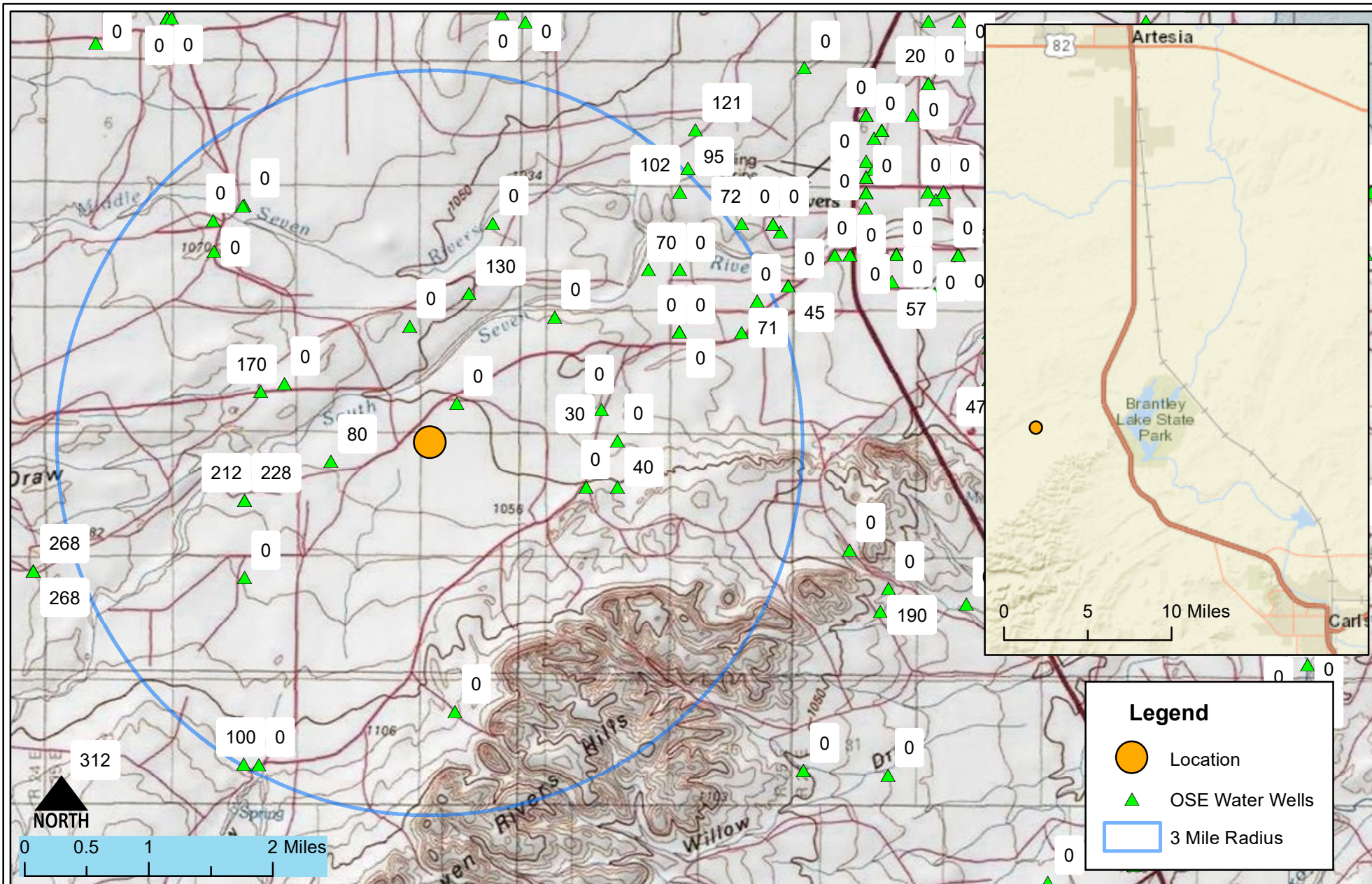
Appendix A: Form C141 Initial

Appendix B: NMOSE Wells Report

Appendix C: Laboratory Analytical Reports

FIGURE 1  
VICINITY AND NMOSE  
DATA MAP





Vicinity and Well Head Protection Map  
Quick Draw 22 D #1 Battery Mewbourne  
S:22 T20S R25E, New Mexico

Figure 1

Date Saved:  
9/25/2017

By: _____	Date: _____	Revisions
By: _____	Date: _____	Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved		

Drawn	Lucas Middleton
Checked	_____
Approved	_____



201 South Halaguena Street  
Carlsbad, New Mexico 88221  
(575) 689-7040  
www.soudermiller.com  
Serving the Southwest & Rocky Mountains

**FIGURE 2**  
**SITE AND SAMPLE**  
**LOCATION MAP**



SITE AND SAMPLE LOCATION MAP  
Quick Draw 22 D #1 Battery- Mewbourne  
S:22 T20S R25E, New Mexico

Figure 2

Date Saved: 9/27/2017	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn Lucas Middleton  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



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**TABLE 3**  
**SUMMARY SAMPLE RESULTS**

## QUICK DRAW 22 D # 1 BATTERY

**Table 3**

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- Field Screens (ppm)	Cl- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 10				50 mg/Kg	10 mg/Kg				1000 mg/Kg		
L1	10/6/2017	0.5	in-situ	<0.023	<0.094	<4.7	260	150	410	--	76
	8/30/2017	2	in-situ	<0.098	<0.024	<4.9	96	57	153	359	--
	8/30/2017	4	in-situ	--	--	--	--	--	--	244	--
	8/30/2017	6	in-situ	--	--	<4.6	<10	<50	<50	--	--
	8/30/2017	10	in-situ	--	--	--	--	--	--	--	63
L2	10/6/2017	0.5	Excavate	<0.025	<0.098	<4.9	840	600	1440	--	330
	10/6/2017	2	in-situ	--	--	--	--	--	--	--	590
	8/30/2017	4	in-situ	--	--	--	--	--	--	932	--
L3	10/6/2017	0.5	Excavate	<0.023	<0.094	<4.7	810	650	1460	--	200
	8/30/2017	2	in-situ	--	--	--	--	--	--	144	--
L4	8/30/2017	0.5	Excavate	<0.093	<0.023	<4.7	<10	<50	<50	--	160
	8/30/2017	2	Excavate	--	--	--	--	--	--	4,128	--
	8/30/2017	4	Excavate	--	--	--	--	--	--	5,218	--
	8/30/2017	6	Cap	--	--	--	--	--	--	4,687	4900
	8/30/2017	8	in-situ	--	--	--	--	--	--	5,461	--
	8/30/2017	12	in-situ	--	--	--	--	--	--	--	260
L5	10/6/2017	0.5	Excavate	--	--	<5.0	<9.8	<49	<65	--	5500
L6	8/30/2017	0.5	in-situ	--	--	--	--	--	--	<216	94

"--" = Not Analyzed

APPENDIX A  
FORM C141 INITIAL

# AMENDED COPY

Received 10/24/2017

NMOCD Dist 2

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

nAB1720628182

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company: Mewbourne Oil Company	Contact: Zack Thomas
Address: PO Box 5270 Hobbs NM 88241	Telephone No. 575-393-5905
Facility Name: Quick Draw 22 D #1 Battery	Facility Type: Producing Oil Well
Surface Owner: BLM	Mineral Owner:
API No. 30-015-37377	

## LOCATION OF RELEASE

Unit Letter D	Section 22	Township 20S	Range 25E	Feet from the 330'	North/South Line North	Feet from the 330'	East/West Line West	County Eddy
------------------	---------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude \_\_32.5651817\_\_ Longitude \_\_-104.480072\_\_

## NATURE OF RELEASE

Type of Release: Oil	Volume of Release: estimated 15 bbls oil	Volume Recovered: 10 bbls oil
Source of Release: Tank Battery	Date and Hour of Occurrence 7-22-17 12:45 pm	Date and Hour of Discovery 7-22-17 12:45 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Shelly Tucker, BLM Mike Bratcher, NMOCD	
By Whom? Zack Thomas	Date and Hour 7-22-17 3:40 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

Lightning struck tank battery causing fire. Well was shut-in and all separation equipment isolated. Atoka, La Huerta, and Riverside Fire Departments were dispatched to put out fire.

Describe Area Affected and Cleanup Action Taken.\*

Affected area- Lined secondary containment as well as a 10' x 40' area South of tanks off of the pad surface. Vacuum truck used to recover all standing fluid.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Zack Thomas	Amended copy - Accepted for Record	
Title: Environmental Rep.	Approval Date:	Expiration Date:
E-mail Address: zthomas@mewbourne.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7-24-17	Phone: 575-602-2188	

\* Attach Additional Sheets If Necessary

2RP-4304

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

# NM OIL CONSERVATION

ARTESIA DISTRICT

JUL 24 2017

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in  
conformance with 19.15.29 NMAC.

RECEIVED

## Release Notification and Corrective Action

NAB 1720628182

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Mewbourne Oil Company	14744	Contact: Zack Thomas
Address: PO Box 5270 Hobbs NM 88241		Telephone No. 575-393-5905
Facility Name: Quick Draw 22 D #1 Battery		Facility Type: Producing Oil Well
Surface Owner: BLM	Mineral Owner:	API No. 30-015-37377

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	22	20S	25E	330'	North	330'	West	Eddy

Latitude 32.5651817 Longitude -104.480072

### NATURE OF RELEASE

Type of Release: Oil	Volume of Release: estimated 15 bbls oil	Volume Recovered: 10 bbls oil
Source of Release: Tank Battery	Date and Hour of Occurrence 7-22-17 12:45 pm	Date and Hour of Discovery 7-22-17 12:45 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Shelly Tucker, BLM Mike Bratcher, NMOCD	
By Whom? Zack Thomas	Date and Hour 7-22-17 3:40 pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Lightning struck tank battery causing fire. Well was shut-in and all separation equipment isolated. Atoka, La Huerta, and Riverside Fire Departments were dispatched to put out fire.		
Describe Area Affected and Cleanup Action Taken.* Affected area- Lined secondary containment as well as a 10' x 40' area South of tanks on pad surface. Vacuum truck used to recover all standing fluid.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		

Signature: <i>Z. Thomas</i>	OIL CONSERVATION DIVISION	
Printed Name: Zack Thomas	Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Environmental Rep.	Approval Date: 7/25/17	Expiration Date: N/A
E-mail Address: zthomas@mcwbourne.com	Conditions of Approval: See attached	Attached <input type="checkbox"/>
Date: 7-24-17	Phone: 575-602-2188	

\* Attach Additional Sheets If Necessary

Please refer to the New Mexico Oil  
Conservation Division Website for  
updated form(s) at:  
[http://www.emnrd.state.nm.us/  
OCD/ forms.html](http://www.emnrd.state.nm.us/OCD/forms.html) Thank you

2RP - 4304

7/25/17 AB

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 7/24/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4304 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

*The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]*

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 8/24/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted



for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

**Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.**

**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us

# APPENDIX B

## NMOSE WELLS REPORT



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">RA 05227</a>		ED		1	21	20S	25E			547506	3602926*	1329	100	80	20
<a href="#">RA 05973</a>		ED		4	3	10	20S	25E		549280	3605111	1965	200	130	70
<a href="#">RA 06504</a>		ED		3	14	20S	25E			550704	3603718*	1965	100		
<a href="#">RA 10141</a>		ED		3	4	1	23	20S	25E	550815	3602617*	2092	245		
<a href="#">RA 05274</a>		ED		2	4	3	14	20S	25E	551005	3603618*	2237	100	30	70
<a href="#">RA 04349</a>		ED		4	1	4	17	20S	25E	546587	3603827*	2305	231	170	61
<a href="#">RA 10142</a>		ED		1	1	2	23	20S	25E	551213	3603218*	2406	91		
<a href="#">RA 05972</a>		ED		3	3	2	23	20S	25E	551217	3602617*	2480	170	40	130
<a href="#">RA 05038</a>		ED		1	1	4	20	20S	25E	546390	3602416*	2541	314	228	86
<a href="#">RA 10618</a>		ED		1	1	4	20	20S	25E	546389	3602414	2542	342	212	130
<a href="#">RA 10779</a>		ED		1	3	2	10	20S	25E	549580	3606026*	2926	1300		
<a href="#">RA 09978</a>		ED		3	1	2	29	20S	25E	546393	3601410*	3007	350		
<a href="#">RA 10918 POD1</a>		ED		3	2	4	11	20S	25E	551600	3605434*	3574	694	70	624
<a href="#">RA 03265</a>		ED		1	2	3	08	20S	25E	545972	3605636*	3735	150		
<a href="#">RA 01952</a>		ED		3	1	3	12	20S	25E	552005	3605437*	3900			
<a href="#">RA 05666</a>		ED		3	1	2	08	20S	25E	546342	3606233	3905	249	249	0
<a href="#">RA 10718</a>		ED		3	1	2	13	20S	25E	552812	3604632*	4252	640	71	569
<a href="#">RA 10817</a>		ED		1	1	1	12	20S	25E	552002	3606443*	4550	743	102	641
<a href="#">RA 04501</a>		ED		4	3	4	12	20S	25E	553011	3605035*	4585	100		
<a href="#">RA 05458</a>		ED		3	3	01	20S	25E		552101	3606747*	4838	500	95	405
<a href="#">C 03245</a>	C	ED		3	1	4	32	20S	25E	546395	3598990*	4855	253	100	153
<a href="#">RA 10818</a>		ED		1	3	2	12	20S	25E	552807	3606039*	4903	692	72	620

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Average Depth to Water: **117 feet**

Minimum Depth: **30 feet**

Maximum Depth: **249 feet**

---

**Record Count:** 22

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 548806.63

**Northing (Y):** 3603203.82

**Radius:** 5000

APPENDIX C  
LABORATORY ANALYTICAL  
REPORTS



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

September 27, 2017

Austin Weyant  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-7040  
FAX

RE: Quick Draw

OrderNo.: 1709048

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/1/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1709048

Date Reported: 9/27/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-0.5

**Project:** Quick Draw

**Collection Date:** 8/30/2017 1:45:00 PM

**Lab ID:** 1709048-001

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	160	30		mg/Kg	20	9/11/2017 10:05:36 PM	33808
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/7/2017 1:14:31 PM	33721
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/7/2017 1:14:31 PM	33721
Surr: DNOP	102	70-130		%Rec	1	9/7/2017 1:14:31 PM	33721
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/5/2017 7:16:53 PM	33682
Surr: BFB	80.2	54-150		%Rec	1	9/5/2017 7:16:53 PM	33682
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	9/5/2017 7:16:53 PM	33682
Toluene	ND	0.047		mg/Kg	1	9/5/2017 7:16:53 PM	33682
Ethylbenzene	ND	0.047		mg/Kg	1	9/5/2017 7:16:53 PM	33682
Xylenes, Total	ND	0.093		mg/Kg	1	9/5/2017 7:16:53 PM	33682
Surr: 4-Bromofluorobenzene	123	66.6-132		%Rec	1	9/5/2017 7:16:53 PM	33682

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-2

**Project:** Quick Draw

**Collection Date:** 8/30/2017 12:55:00 PM

**Lab ID:** 1709048-002

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	69	9.4		mg/Kg	1	9/7/2017 1:36:48 PM	33721
Motor Oil Range Organics (MRO)	57	47		mg/Kg	1	9/7/2017 1:36:48 PM	33721
Surr: DNOP	106	70-130		%Rec	1	9/7/2017 1:36:48 PM	33721
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/5/2017 7:40:44 PM	33682
Surr: BFB	83.8	54-150		%Rec	1	9/5/2017 7:40:44 PM	33682
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.024		mg/Kg	1	9/5/2017 7:40:44 PM	33682
Toluene	ND	0.049		mg/Kg	1	9/5/2017 7:40:44 PM	33682
Ethylbenzene	ND	0.049		mg/Kg	1	9/5/2017 7:40:44 PM	33682
Xylenes, Total	ND	0.098		mg/Kg	1	9/5/2017 7:40:44 PM	33682
Surr: 4-Bromofluorobenzene	121	66.6-132		%Rec	1	9/5/2017 7:40:44 PM	33682

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-6

**Project:** Quick Draw

**Collection Date:** 8/30/2017

**Lab ID:** 1709048-003

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/7/2017 1:58:56 PM	33721
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/7/2017 1:58:56 PM	33721
Surr: DNOP	108	70-130		%Rec	1	9/7/2017 1:58:56 PM	33721
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	9/5/2017 8:04:35 PM	33682
Surr: BFB	80.1	54-150		%Rec	1	9/5/2017 8:04:35 PM	33682

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-10

**Project:** Quick Draw

**Collection Date:** 8/30/2017 1:10:00 PM

**Lab ID:** 1709048-004

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	63	30		mg/Kg	20	9/11/2017 10:18:01 PM	33808

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L6-0.5

**Project:** Quick Draw

**Collection Date:** 8/30/2017 2:12:00 PM

**Lab ID:** 1709048-005

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	94	30		mg/Kg	20	9/11/2017 10:30:26 PM	33808

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-6

**Project:** Quick Draw

**Collection Date:** 8/30/2017 1:48:00 PM

**Lab ID:** 1709048-006

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	4900	150		mg/Kg	100	9/26/2017 12:04:10 AM	33808

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1709048**

Date Reported: **9/27/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-12

**Project:** Quick Draw

**Collection Date:** 8/30/2017 2:12:00 PM

**Lab ID:** 1709048-007

**Matrix:** SOIL

**Received Date:** 9/1/2017 8:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	260	30		mg/Kg	20	9/13/2017 1:24:50 PM	33817

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709048

27-Sep-17

Client: Souder, Miller &amp; Associates

Project: Quick Draw

Sample ID	MB-33808		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 33808		RunNo: 45542					
Prep Date:	9/11/2017		Analysis Date: 9/11/2017		SeqNo: 1444864		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-33808		SampType:	lcs		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS		Batch ID:	33808		RunNo:	45542				
Prep Date:	9/11/2017		Analysis Date:	9/11/2017		SeqNo:	1444865	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	96.2	90	110				

Sample ID	MB-33817		SampType:	mblk		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	33817		RunNo:	45597				
Prep Date:	9/12/2017		Analysis Date:	9/13/2017		SeqNo:	1447722		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-33817		SampType:	lcs		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS		Batch ID:	33817		RunNo:	45597				
Prep Date:	9/12/2017		Analysis Date:	9/13/2017		SeqNo:	1447723		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	14	1.5	15.00	0	94.0	90	110				

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709048

27-Sep-17

Client: Souder, Miller &amp; Associates

Project: Quick Draw

Sample ID	LCS-33721		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 33721		RunNo: 45469					
Prep Date:	9/6/2017		Analysis Date: 9/7/2017		SeqNo: 1440795		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.0	73.2	114			
Surr: DNOP	4.8		5.000		96.9	70	130			

Sample ID	MB-33721		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 33721		RunNo: 45469					
Prep Date:	9/6/2017		Analysis Date: 9/7/2017		SeqNo: 1440796		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		108	70	130			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709048

27-Sep-17

Client: Souder, Miller &amp; Associates

Project: Quick Draw

Sample ID	MB-33682		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 33682		RunNo: 45408					
Prep Date:	9/1/2017		Analysis Date: 9/5/2017		SeqNo: 1439055		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	820		1000		82.4	54	150			

Sample ID	LCS-33682		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 33682		RunNo: 45408					
Prep Date:	9/1/2017		Analysis Date: 9/5/2017		SeqNo: 1439056		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.3	76.4	125			
Surr: BFB	910		1000		90.9	54	150			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1709048

27-Sep-17

Client: Souder, Miller &amp; Associates

Project: Quick Draw

Sample ID	MB-33682		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 33682		RunNo: 45408					
Prep Date:	9/1/2017		Analysis Date: 9/5/2017		SeqNo: 1439078		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.3		1.000		128	66.6	132			

Sample ID	LCS-33682			SampType:	LCS			TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS			Batch ID:	33682			RunNo:	45408					
Prep Date:	9/1/2017			Analysis Date:	9/5/2017			SeqNo:	1439079			Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	1.1	0.025	1.000		0	113	80	120						
Toluene	1.1	0.050	1.000		0	113	80	120						
Ethylbenzene	1.1	0.050	1.000		0	112	80	120						
Xylenes, Total	3.4	0.10	3.000		0	115	80	120						
Surr: 4-Bromofluorobenzene	1.3		1.000			128	66.6	132						

### Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1709048

RcptNo: 1

Received By: Erin Melendrez

9/1/2017 8:45:00 AM

*UUG*

Completed By: Ashley Gallegos

9/1/2017 12:32:52 PM

*Ag*

Reviewed By:

*RL*

9/1/17

### Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
( $<2$  or  $>12$  unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

### Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

### 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

# Chain-of-Custody Record

Client: SMA

Mailing Address: 201 S HALAGUENO

Phone #: 505 689-7040

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name: QUICK DRAW

Project #:

Project Manager: ARSON WEYANT

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.8-0.1 (CF) = 1.7

Date	Time	Matrix	Sample Request ID
8/30	1:45	SOIL	L4-0.5
	12:55		L1-2
			L1-6
	1:10		L1-10
	2:12		L6-0.5
	1:40		L4-6
	2:12		L4-12

Container Type and #	Preservative Type	HEAL No.
1 402		17D9048
		-001
		-002
		-003
		-004
		-005
		-006
		-007
		-008

Date: 8/31/17 Time: 0830

Relinquished by: J. Hark

Date: 8/31/17 Time: 1900

Relinquished by: APL

Received by: APL Date: 8/31/17 Time: 0930

Received by: WTE Date: 08/31/17 Time: 0845



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

BTEX + MTBE + TMBs (8021)	X
BTEX + MTBE + TPH (Gas only)	X
TPH 8015B (GRO / DRO / MRO)	X
TPH (Method 418.1)	
EDB (Method 504.1)	
PAH's (8310 or 8270 SIMS)	
RCRA 8 Metals	
Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	
8081 Pesticides / 8082 PCB's	
8260B (VOA)	
8270 (Semi-VOA)	X
LCI - EPA300	X
Air Bubbles (Y or N)	



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

October 18, 2017

Austin Weyant  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-7040  
FAX

RE: Mewbourne Quick Draw

OrderNo.: 1710507

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/10/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1710507

Date Reported: 10/18/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-0.5'

**Project:** Mewbourne Quick Draw

**Collection Date:** 10/6/2017 9:55:00 AM

**Lab ID:** 1710507-001

**Matrix:** SOIL

**Received Date:** 10/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	76	30		mg/Kg	20	10/12/2017 11:13:41 PM	34395
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	260	9.4		mg/Kg	1	10/11/2017 3:18:14 PM	34326
Motor Oil Range Organics (MRO)	150	47		mg/Kg	1	10/11/2017 3:18:14 PM	34326
Surr: DNOP	108	70-130		%Rec	1	10/11/2017 3:18:14 PM	34326
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2017 11:11:40 AM	34330
Surr: BFB	118	54-150		%Rec	1	10/11/2017 11:11:40 AM	34330
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/11/2017 11:11:40 AM	34330
Toluene	ND	0.047		mg/Kg	1	10/11/2017 11:11:40 AM	34330
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2017 11:11:40 AM	34330
Xylenes, Total	ND	0.094		mg/Kg	1	10/11/2017 11:11:40 AM	34330
Surr: 4-Bromofluorobenzene	96.3	66.6-132		%Rec	1	10/11/2017 11:11:40 AM	34330

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1710507

Date Reported: 10/18/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-0.5'

**Project:** Mewbourne Quick Draw

**Collection Date:** 10/6/2017 9:59:00 AM

**Lab ID:** 1710507-002

**Matrix:** SOIL

**Received Date:** 10/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	330	30		mg/Kg	20	10/12/2017 11:26:06 PM	34395
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	840	9.5		mg/Kg	1	10/11/2017 3:40:14 PM	34326
Motor Oil Range Organics (MRO)	600	48		mg/Kg	1	10/11/2017 3:40:14 PM	34326
Surr: DNOP	125	70-130		%Rec	1	10/11/2017 3:40:14 PM	34326
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/11/2017 12:22:08 PM	34330
Surr: BFB	98.4	54-150		%Rec	1	10/11/2017 12:22:08 PM	34330
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.025		mg/Kg	1	10/11/2017 12:22:08 PM	34330
Toluene	ND	0.049		mg/Kg	1	10/11/2017 12:22:08 PM	34330
Ethylbenzene	ND	0.049		mg/Kg	1	10/11/2017 12:22:08 PM	34330
Xylenes, Total	ND	0.098		mg/Kg	1	10/11/2017 12:22:08 PM	34330
Surr: 4-Bromofluorobenzene	95.4	66.6-132		%Rec	1	10/11/2017 12:22:08 PM	34330

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order **1710507**

Date Reported: **10/18/2017**

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-2'

**Project:** Mewbourne Quick Draw

**Collection Date:** 10/6/2017 10:12:00 AM

**Lab ID:** 1710507-003

**Matrix:** SOIL

**Received Date:** 10/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	590	30		mg/Kg	20	10/13/2017 9:21:23 AM	34395

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1710507

Date Reported: 10/18/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-0.5'

**Project:** Mewbourne Quick Draw

**Collection Date:** 10/6/2017 10:14:00 AM

**Lab ID:** 1710507-004

**Matrix:** SOIL

**Received Date:** 10/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	200	30		mg/Kg	20	10/13/2017 9:33:48 AM	34395
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	810	100		mg/Kg	10	10/12/2017 9:15:05 AM	34326
Motor Oil Range Organics (MRO)	650	500		mg/Kg	10	10/12/2017 9:15:05 AM	34326
Surr: DNOP	0	70-130	S	%Rec	10	10/12/2017 9:15:05 AM	34326
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/11/2017 1:32:42 PM	34330
Surr: BFB	110	54-150		%Rec	1	10/11/2017 1:32:42 PM	34330
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Benzene	ND	0.023		mg/Kg	1	10/11/2017 1:32:42 PM	34330
Toluene	ND	0.047		mg/Kg	1	10/11/2017 1:32:42 PM	34330
Ethylbenzene	ND	0.047		mg/Kg	1	10/11/2017 1:32:42 PM	34330
Xylenes, Total	ND	0.094		mg/Kg	1	10/11/2017 1:32:42 PM	34330
Surr: 4-Bromofluorobenzene	94.6	66.6-132		%Rec	1	10/11/2017 1:32:42 PM	34330

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1710507

Date Reported: 10/18/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L5-0.5'

**Project:** Mewbourne Quick Draw

**Collection Date:** 10/6/2017 10:17:00 AM

**Lab ID:** 1710507-005

**Matrix:** SOIL

**Received Date:** 10/10/2017 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	5500	300		mg/Kg	200	10/17/2017 12:53:20 AM	34395
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/11/2017 2:38:15 PM	34326
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	10/11/2017 2:38:15 PM	34326
Surr: DNOP	86.2	70-130		%Rec	1	10/11/2017 2:38:15 PM	34326
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/11/2017 1:56:05 PM	34330
Surr: BFB	90.4	54-150		%Rec	1	10/11/2017 1:56:05 PM	34330

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710507

18-Oct-17

Client: Souder, Miller &amp; Associates

Project: Mewbourne Quick Draw

Sample ID	MB-34395		SampType: mblk		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 34395		RunNo: 46327					
Prep Date:	10/12/2017		Analysis Date: 10/12/2017		SeqNo: 1475849		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-34395		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 34395		RunNo: 46327					
Prep Date:	10/12/2017		Analysis Date: 10/12/2017		SeqNo: 1475850		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710507

18-Oct-17

Client: Souder, Miller &amp; Associates

Project: Mewbourne Quick Draw

Sample ID	LCS-34326		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 34326		RunNo: 46256					
Prep Date:	10/10/2017		Analysis Date: 10/11/2017		SeqNo: 1473179		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	83.6	73.2	114			
Surr: DNOP	4.3		5.000		85.8	70	130			

Sample ID	MB-34326		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 34326		RunNo: 46256					
Prep Date:	10/10/2017		Analysis Date: 10/11/2017		SeqNo: 1473180		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.8		10.00		98.2	70	130			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710507

18-Oct-17

Client: Souder, Miller &amp; Associates

Project: Mewbourne Quick Draw

Sample ID	MB-34330		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 34330		RunNo: 46259					
Prep Date:	10/10/2017		Analysis Date: 10/11/2017		SeqNo: 1474022		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		91.1	54	150			

Sample ID	LCS-34330		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 34330		RunNo: 46259					
Prep Date:	10/10/2017		Analysis Date: 10/11/2017		SeqNo: 1474023		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	117	76.4	125			
Surr: BFB	1000		1000		101	54	150			

Sample ID	1710507-002AMS	SampType: MS			TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	L2-0.5'	Batch ID: 34330			RunNo: 46259					
Prep Date:	10/10/2017	Analysis Date: 10/11/2017			SeqNo: 1474030		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.8	24.22	0	136	77.8	128			S
Surr: BFB	1100		969.0		110	54	150			

Sample ID	1710507-002AMSD		SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	L2-0.5'		Batch ID: 34330		RunNo: 46259						
Prep Date:	10/10/2017		Analysis Date: 10/11/2017		SeqNo: 1474031		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	32	4.8	23.92	0	133	77.8	128	3.30	20	S	
Surr: BFB	1000		956.9		110	54	150	0	0		

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1710507

18-Oct-17

**Client:** Souder, Miller & Associates

**Project:** Mewbourne Quick Draw

Sample ID <b>MB-34330</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>34330</b>		RunNo: <b>46259</b>							
Prep Date: <b>10/10/2017</b>	Analysis Date: <b>10/11/2017</b>		SeqNo: <b>1474037</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.0	66.6	132			

Sample ID <b>LCS-34330</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>34330</b>		RunNo: <b>46259</b>							
Prep Date: <b>10/10/2017</b>	Analysis Date: <b>10/11/2017</b>		SeqNo: <b>1474038</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	97.1	80	120			
Toluene	0.97	0.050	1.000	0	96.6	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.5	80	120			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.1	66.6	132			

Sample ID <b>1710507-001AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>L1-0.5'</b>	Batch ID: <b>34330</b>		RunNo: <b>46259</b>							
Prep Date: <b>10/10/2017</b>	Analysis Date: <b>10/11/2017</b>		SeqNo: <b>1474041</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9597	0	108	80.9	132			
Toluene	1.1	0.048	0.9597	0.01039	109	79.8	136			
Ethylbenzene	1.1	0.048	0.9597	0.01470	114	79.4	140			
Xylenes, Total	3.3	0.096	2.879	0.03567	114	78.5	142			
Surr: 4-Bromofluorobenzene	0.92		0.9597		96.2	66.6	132			

Sample ID <b>1710507-001AMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>L1-0.5'</b>	Batch ID: <b>34330</b>		RunNo: <b>46259</b>							
Prep Date: <b>10/10/2017</b>	Analysis Date: <b>10/11/2017</b>		SeqNo: <b>1474042</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	0.9960	0	110	80.9	132	5.98	20	
Toluene	1.1	0.050	0.9960	0.01039	113	79.8	136	6.86	20	
Ethylbenzene	1.2	0.050	0.9960	0.01470	118	79.4	140	7.30	20	
Xylenes, Total	3.6	0.10	2.988	0.03567	119	78.5	142	7.58	20	
Surr: 4-Bromofluorobenzene	0.98		0.9960		98.1	66.6	132	0	0	

### Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1710507

RcptNo: 1

Received By: Richie Eriacho 10/10/2017 9:30:00 AM

Completed By: Erin Melendrez 10/10/2017 9:57:28 AM

Reviewed By: DDS 10/10/17

*[Handwritten initials]*

## Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_  
Checked by: \_\_\_\_\_

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.4	Good	Yes			

